Amendments to the Claims

1-14. (Canceled)

15. (Currently Amended) ~~The method of claim 8~~ A method of activating a CFTR protein comprising:

applying a polypeptide to a mutant CFTR protein, wherein the CFTR protein ~~is a mutant which~~ forms a cAMP regulated channel that reaches a cell's plasma membrane but fails to undergo full activation,

wherein said polypeptide comprises a portion of a CFTR protein of between 10 and 100 amino acids, said portion comprising 18 amino acids as shown in SEQ ID NO:1, and

wherein the open probability of the channel formed by the CFTR increases by at least 25%.

16. (Original) The method of claim 15 wherein the CFTR protein is listed at http://www.genet.sickkids.on.ca/cftr-cgi-bin/fulltable.

17. (Currently Amended) ~~The method of claim 8~~ A method of activating a CFTR protein comprising:

~~wherein the step of applying is performed by~~ administering an aerosolized polypeptide to a patient with a mutant CFTR protein, wherein the CFTR protein forms a cAMP regulated chloride channel,

wherein the polypeptide comprises a portion of a CFTR protein of between 10 and 100 amino acids, said portion comprising 18 amino acids as shown in SEQ ID NO:1,

whereby the open probability of the channel formed by the CFTR increases by at least 25%.

18. (Canceled)

19. (Currently Amended) ~~The method of claim 8 wherein the step of~~ A method of activating a CFTR protein comprising:

~~applying the polypeptide is accomplished by~~ administering a nucleic acid encoding ~~the~~ a polypeptide to a patient who expresses ~~the~~ a CFTR protein, wherein the CFTR protein forms a cAMP regulated chloride channel,

wherein the polypeptide comprises a portion of CFTR protein of between 10 and 100 amino acids, said portion comprising 18 amino acids as shown in SEQ ID NO:1,

whereby the polypeptide is expressed, and

whereby the open probability of the channel formed by the CFTR increases by at least 25%.

20. (Original) The method of claim 19 wherein the nucleic acid is administered as an aerosol to the patient's airways.

21-27 (Canceled)

28. (Currently Amended) ~~The method of claim 21~~ A method of activating a CFTR protein comprising:

applying a polypeptide to a mutant CFTR protein ~~wherein the CFTR protein is a mutant~~ which forms a cAMP regulated channel and which reaches a cell's plasma membrane but fails to undergo full activation,

wherein said polypeptide comprises a portion of CFTR protein of between 10 and 100 amino acids, said portion comprising 22 amino acids as shown in SEQ ID NO:1, and

wherein the open probability of the channel formed by the CFTR increases by at least

25%.

29. (Original) The method of claim 15 wherein the CFTR protein is listed at http://www.genet.sickkids.on.ca/cftr-cgi-bin/fulltable.

30. (Currently Amended) ~~The method of claim 21 wherein the step of applying is performed by~~ A method of activating a CFTR protein comprising:

administering an aerosolized polypeptide to a patient with a mutant CFTR protein, wherein the CFTR protein forms a cAMP regulated chloride channel,

wherein the polypeptide comprises a portion of CFTR protein of between 10 and 100 amino acids, said portion comprising 22 amino acids as shown in SEQ ID NO:1,

whereby the open probability of the channel formed by the CFTR increases by at least 25%.

31. (Canceled)

32. (Currently Amended) ~~The method of claim 21 wherein the step of applying the polypeptide is accomplished by~~ A method of activating a CFTR protein comprising:

administering a nucleic acid encoding a ~~the~~ polypeptide to a patient who expresses ~~the~~ a CFTR protein, wherein the CFTR protein forms a cAMP regulated chloride channel,

wherein the polypeptide comprises a portion of CFTR protein of between 10 and 100 amino acids, said portion comprising 22 amino acids as shown in SEQ ID NO:1,

whereby the polypeptide is expressed, and

whereby the open probability of the channel formed by the CFTR increases by at least 25%.

33. (Original) The method of claim 32 wherein the nucleic acid is administered as an aerosol to

the patient's airways.

34. (Canceled)

35. (New) An isolated fusion protein comprising:

a portion of CFTR protein, wherein said portion consists of between 18 and 100 amino acid residues, wherein said portion comprises 18 contiguous amino acid residues as shown in SEQ ID NO:1, and wherein the fusion protein does not comprise full-length CFTR.

36. (New) The isolated fusion protein of claim 35 which comprises no more than 100 contiguous amino acid residues of CFTR protein.